

BORON PHOSPHIDE-BASED SEMICONDUCTOR
LIGHT-EMITTING DEVICE, PRODUCTION METHOD THEREOF AND
LIGHT-EMITTING DIODE

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ABSTRACT OF THE DISCLOSURE

10 A boron phosphide-based semiconductor light-emitting
device, which device includes a light-emitting member
having a hetero-junction structure in which an n-type
lower cladding layer formed of an n-type compound
semiconductor, an n-type light-emitting layer formed of
15 an n-type Group III nitride semiconductor, and a p-type
upper cladding layer provided on the light-emitting layer
and formed of a p-type boron phosphide-based
semiconductor are sequentially provided on a surface of a
conductive or high-resistive single-crystal substrate and
20 which device includes a p-type Ohmic electrode provided
so as to achieve contact with the p-type upper cladding
layer, characterized in that a amorphous layer formed of
boron phosphide-based semiconductor is disposed between
the p-type upper cladding layer and the n-type light-
25 emitting layer. This boron phosphide-based semiconductor
light-emitting device exhibits a low forward voltage or
threshold value and has excellent reverse breakdown
voltage characteristics.